

Fact Sheet

2011 Missouri National Recreational River Bankline Inventory Project

Introduction

The Missouri River Institute at the University of South Dakota conducted a bankline inventory on the 39-mile and 59-mile Districts of the Missouri National Recreational River (MNRR) during the months of October and November 2011. The purpose of this study was to create a database that contains bank descriptions and their locations. Included in the database are any processes that were occurring at the time of data collection, detailed information on stabilization if it was present, and any areas in need of cleanup.

Data Collection

Bankline data was collected by boat using a Trimble Pro XT GPS unit during the months of October and November 2011. Traveling at low speed and following the bank as closely as possible, the start of a new line segment was recorded whenever there was a change in bank characteristics. Bank characteristics were manually recorded for each line segment using a data dictionary specific to this project (see attachment A). Where photos were taken, a photo ID number was recorded with the bank description.

Map Document

Layers featured in the map document and a description of each are listed below.

Point Data

- **River Miles:** River mile markers on the MNRR.
- **Hard Points:** All hard points recorded during data collection. Stabilization characteristics are listed in the attribute table and a photo is attached.
- **Other Stabilization Points:** Segments of stabilization that were small enough to be represented by a point rather than a line. Stabilization characteristics are listed in the attribute table and a photo (if taken) is accessed through the HTML popup tool.
- **Possible Cleanup Sites:** These areas included items such as metal, wire, concrete (that did not appear to be used as stabilization), tires, trash, appliances or car

bodies. The type of material is listed in the attribute table and a photo of each site is accessed through the HTML popup tool.

2011 Bank Segments: This layer represents the conditions of the post-flood banklines on the 39-mile and 59-mile segments of the MNRR determined during the time of this project. A bank description can be found in the attribute table and photo (if taken) is accessed through the HTML popup tool. This layer has been symbolized based on three classifications: unstabilized, stabilized or TBD (to be determined).

Pre-flood Bank Stabilization Assessment: This layer was provided by the National Park Service. It includes data gathered from 2004-2010 of permitted and/or stabilized areas. It is symbolized by a black and white dashed line to represent unstabilized areas, and a black and yellow dashed line to represent stabilized areas.

Landowner Data: A polygon coverage of the land ownership parcels along the MNRR.

MNRR Boundary: A coverage depicting the working administrative boundary of MNRR.

Aerial Imagery: Imagery is not included in the Bank Analysis geodatabase. For this project, 2010 USDA NAIP imagers and 2011 USACE imagery was used.

Geodatabase Structure

Feature Datasets

1. Landowners

- Feature Class: *Phase1_39_1*
 - Phase1_39_1 is a polygon coverage of the land ownership parcels along the 39-mile segment of the MNRR.
- Feature Class: *Phase2_59_1*
 - Phase2_59_1 is a polygon coverage of the land ownership parcels along the 59-mile segment of the MNRR.

2. MNRR Boundary

- Feature Class: *mn39bndp_polygon_1*
 - This layer depicts the working administrative boundary of the MNRR 39-mile segment. The layer was derived from original boundary maps (1:24K quads) drafted by park staff.

- Feature Class: mn59bndp_polygon_1
 - This layer depicts the working administrative boundary of the 59-mile MNRR segment. The layer was derived from original boundary maps (1:24K quads) drafted by park staff.

3. NPS Stabilization

- Feature Class: NPS39miStabilization
 - This layer consists of data gathered by the National Park Service from 2004-2010 of permitted and/or stabilized areas.
- Feature Class: NPS59miStabilization
 - This layer consists of data gathered by the National Park Service from 2004-2010 of permitted and/or stabilized areas .

Feature Classes

- **Bank Segments:** This line feature class represents the 39-mile and 59-mile MNRR bankline conditions during the time of this project. A bank description can be found in the attribute table and photo (if taken) is accessed through the HTML popup tool.
- **Cleanup Sites:** This point feature class contains locations, descriptions and photos of possible cleanup sites found on the 39-mile and 59-mile segments of the MNRR. Areas included items such as metal, wire, concrete (that did not appear to be used as stabilization), tires, trash, appliances or car bodies.
- **Hard Points:** This point feature class contains locations, stabilization characteristics and photos of hard points on the 39-mile and 59-mile segments of the MNRR.
- **Stabilization Points:** This point feature class contains data points where only a single point was necessary to describe a small area of stabilization.
- **River Miles:** River mile markers for the 39-mile and 59-mile MNRR.

Tables and Relationship Classes

Each of the feature classes listed in the previous section (except River_Miles) has a table and relationship class associated with it. Each table stores photos for its corresponding feature class. The relationship class for each corresponding feature class makes the association between the photo and the record in the attribute table. The photos can be accessed by using the HTML popup tool and clicking on a bank segment or point feature.

Attachment A

Data Dictionary Template

Bankline ID	Bank Condition	Tree Loss	Stabilization	Stabilization Type	Stab. Material	Stab. Size	Stab. Cover	Cleanup Site
	Erosion	Major	Existing	Bank Armor	Brick	Small (<1 ft)	Soil	Metal
	Deposition	Minor	New	Hard Point	Concrete	Medium (<1-3 ft)	Vegetated	Concrete
Date	Vegetated	None	Existing & New	Windrow	Fieldstone	Large (<3 ft)		Wire
	Non-vegetated	Unknown	Unknown	Windrow Launching	Quartzite			Appliances
					Limestone/Shale	Corps Rule Dim.	OHWM	Car Bodies
Discharge	Erosion Type				Car Bodies	Yes	Above	Tires
	Cutbank				Trash	No	Below	Trash
	Undercut Bank				Biostabilization	Unknown	Unknown	
Photo ID					Tires			
	Notes							